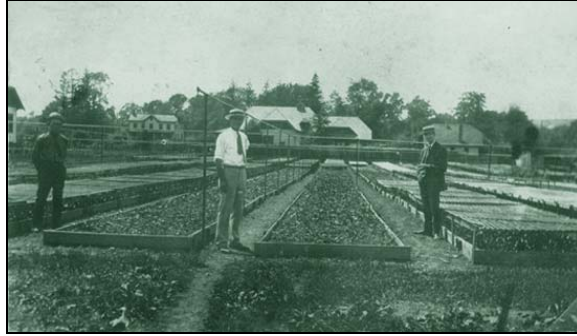


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CHAPTER V: CULTURAL LANDSCAPE PRESERVATION TREATMENT

A. INTRODUCTION TO CULTURAL LANDSCAPE PRESERVATION TREATMENT

The following sections provide an exploration of landscape preservation treatment alternatives and formulates a treatment approach for the Princeton Nurseries Kingston Site. In this preservation treatment discussion a range of approaches is tested, including preserve, restore, rehabilitate and reconstruct. The most likely treatments to apply are preserve and rehabilitate, as neither restoration nor reconstruction to the intensely productive nursery landscape are feasible. The proposed treatment approach recommended draws on the history of the property as a commercial nursery, and addresses the current need to accommodate historic character, environmental stewardship, and community land conservation efforts for this and the surrounding properties. Previous chapters explored landscape history, current conditions, landscape context, and historical integrity. The landscape treatment text and plans frame an approach recognizing landscape continuity and change and seek to set a future trajectory that meets multiple objectives. The starting point for preservation is to identify and preserve what we inherit, not necessarily return the landscape to an earlier time or character. The approach applied here recognizes that the former nursery operation has ended and land management that is directed toward landscape legibility, use and historic character retention to the degree feasible are aspects that frame the future landscape. The following plans serve as graphic references for this discussion:

- *Plan 18, Core Area Treatment & Management Plan*
- *Plan 18a, Alternate Core Area Treatment & Management Plan*
- *Plan 19, Community Context & Connections Plan*

B. LANDSCAPE TREATMENT ALTERNATIVES

Consideration of preservation objectives for the Princeton Nurseries Kingston Site landscape should be informed by United States preservation standards and guidelines. Federal guidance for landscape preservation set forth options for a historic property to include a range of interventions from Preservation, which is a baseline in stewardship for any intervention, to more intensive Restoration or Reconstruction or Rehabilitation. For cultural landscapes, the *Secretary of the Interior's Standards*

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for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (Guidelines), A Guide to Cultural Landscape Reports: Contents, Process, and Techniques, and National Park Service Director's Order #28: Cultural Resource Management identify and define preservation treatments that can be applied to any historic property.¹ This Federal preservation guidance sets forth four approaches to the preservation treatment of cultural landscapes: Preservation, Restoration, Rehabilitation, and Reconstruction. These treatments propose different levels of intensity of intervention and activity within the landscape that address the purposes of this effort as outlined in the introduction.

The baseline intent for any treatment alternative is to identify and respect remaining historic landscape character and features. To address the preservation treatment of the Princeton Nurseries Kingston Site landscape, the amount and detail of available documentation, the understanding of the property's level of continuity and change from the early 20th century to today, the understanding of current landscape use, and the consideration of the role of the landscape within a community context are important aspects for consideration. An understanding of the overall character and details of the landscape has been achieved in the preceding chapters. The level of landscape change over the course of time is an important consideration in terms of the ability to link historic landscape character to treatment options within the existing landscape. Anticipated public access, use, and maintenance capabilities are also considered. For reference, the preservation treatment definitions are quoted from the *Guidelines* as follows.

B1. Preservation

*Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction.*²

Preservation is the most modest intervention approach, in which stabilization and repair is emphasized. It is an appropriate stewardship and sustainability choice when many elements are intact and financial resources and/or staffing are limited. Preservation can also be viewed as a provisional treatment until the acquisition of additional documentation to allow for restoration or reconstruction, or until resources are garnered for a more ambitious intervention. Preservation treatment emphasizes the goals of conserving, retaining, and maintaining the historic fabric and underlies the other three, more intensive preservation treatments approaches. Preservation can and should be applied as an initial and underlying approach that values the historic places and carries out stewardship actions on its behalf. Preservation of remaining historic features within the Princeton Nurseries Kingston Site landscape from the nursery era is warranted and appropriate.

B2. Restoration

*Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time, by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period.*³

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In contrast to Preservation, Restoration is a more intensive treatment approach that is dependent on high levels of documentation to define a clear restoration target date as part of undertaking an intervention with limited speculation. Restoration treatment first seeks to stabilize and repair all historic features present during the period of significance. Secondly, a Restoration treatment reinstates lost character by fully renewing degraded aspects and features of the cultural landscape. The treatment may also require the removal of features added after the time period designated for restoration. Restoration aims to recapture the overall character and details of an entire landscape or may seek to restore a selected landscape unit, detail, or group of elements. Restoration of overall landscape character, spatial organization, land uses, land patterns and visual relationships can be applied without restoration to precise details of all elements. For many historic landscapes restoration of every detail to an earlier time is not possible due to lack of specificity of documentation, projected staffing, available financial resources and/or the overall mission of the property. Restoration of the Princeton Nurseries Kingston Site landscape to a commercial nursery does not suit project objectives and is not an appropriate approach.

B3. Rehabilitation

*Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alteration, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.*⁴

The third treatment approach, Rehabilitation, incorporates preservation values with contemporary uses and issues of maintainability and sustainability. Rehabilitation treatment emphasizes compatibility with historic resources and respect for safeguarding remaining historic character and elements. Rehabilitation philosophy combines respect for the historic resources with integration of contemporary uses, maintenance, code compliance, security, and other relevant concerns. A rehabilitation treatment is frequently applied to public landscapes with high use and to formerly private landscapes that are opened for public access. An overall Rehabilitation approach for the Princeton Nurseries Kingston Site landscape is highly appropriate to address current conditions and desires for a higher degree of landscape legibility, visitors access, and community uses. Aspects of historic recapture and contemporary use, maintainability, and sustainability can be accommodated through a Rehabilitation treatment approach. For all these factors, rehabilitation is an appropriate treatment to apply at Princeton Nurseries Kingston Site.

B4. Reconstruction

*Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.*⁵

Reconstruction of an entire lost or significantly degraded landscape in its original location is not often undertaken. A targeted approach to reconstruction of a single well-documented feature is a more common treatment. A Reconstruction treatment may be the most appropriate approach in a museum setting when documentation is complete, adequate resources are available, and interpretive goals direct full recapture of an important landscape element. In large landscapes a missing element or detail, such as a particular feature like a fountain or a unique furnishing like a bench is sometimes

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reconstructed. This approach is uncommon because detailed documentation is required to construct an exact replica with limited speculation. Due to the limited available documentation and project goals, a Reconstruction treatment is not feasible for the Princeton Nurseries Kingston Site. However, partial reconstruction of character aspects of selected historic features can be considered for the site from the landscape perspective, including interpretive rows of planting.

B5. Selected Landscape Treatment

Based on the above discussion, the recommended landscape preservation treatment for the Princeton Nurseries Kingston Site landscape is Preservation and Rehabilitation. This proposed intervention provides a philosophical framework that respects this historical landscape place, its character, features, and details and reinforces landscape integrity while providing flexibility to address contemporary uses, desires, and maintenance considerations.

C. LANDSCAPE TREATMENT CONSIDERATIONS

A series of landscape preservation and management considerations arise from the Cultural Landscape Report (CLR) process, which explores site history, evolution, and the sequence of aerials and plans presented and discussed. The existing plans and documentation of current landscape character and features demonstrate, in the analysis overlay process, enduring patterns. The change readily apparent today is the cessation of the active nursery and the related removal of the plants, managers and growers from this landscape. The Princeton Nurseries Kingston site cultural landscape is a valuable community asset. This property provides a window into an important aspect of local, regional, and national history through the innovative Princeton Nurseries operations that grew from this property. The stewardship objectives of the landscape preservation approach are based on six considerations:

- HERITAGE: Preserve, Steward & Interpret the Landscape
- MAINTENANCE: Organize Landscape Types for a Limited Maintenance
- ECOLOGY: Conserve & Manage the Landscape for Enhanced Ecosystem Services
- ACCESS: Enhance Public Access Supporting Landscape Use, Understanding & Enjoyment
- LINKAGE: Connect Adjacent Public Lands and, where appropriate, Private Lands as Part of Landscape Network
- CONTEXT: Preserve the Surrounds & Remnant Features

These six considerations drive the Preservation and Rehabilitation treatment recommendations for the Princeton Nurseries Kingston Site. In the recommendations, consideration is given to achieving each of these objectives.

D. LANDSCAPE TREATMENT APPROACH

Several levels of treatment are recommended for the Kingston Site, which are informed by the considerations addressed in the previous section. This narrative presents a Preservation and Rehabilitation treatment approach that is organized into five categories of improvement within the Princeton Nurseries site, and one category in the surrounding community. This section also

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discusses additional concepts to consider, such as access to water for agricultural purposes on the site. The preservation treatment categories are:

Within the Kingston Nurseries Princeton Property

1. Preserve intact historic character-defining features
2. Rehabilitate and maintain historic character-defining features
3. Enhance habitat and ecological services
4. Explore agricultural reuse alternatives
5. Reinststate internal roads and consider links to surrounding trails, provide overview maps of property and adjacent lands

For Surrounding Community

6. Consider Context of Surrounding Lands & Partners & Community Use

D1. Preserve Historic Character-Defining Features

Preservation of these features builds on the Heritage consideration: listed in Section C.

The preservation of intact historic character-defining features at the Princeton Nurseries Kingston Site is an important recommendation toward the informed stewardship of this historic landscape. While the imprint of the Princeton Nurseries operations on the site is diminished from the heyday of nursery use, the landscape as found today retains aspects of spatial organization, topography, vegetation, circulation systems, and buildings from the nursery years. Intact character-defining elements of the landscape are recommended for preservation. The pattern of rectilinear plots, the level field topography crossed by drainage features, and the remnant planted specimen trees and rows, scattered field plantings, and windrows are features to preserve and manage into the future. For example, the volunteer growth around the shadblow along the access road west of the former production fields should be cleared to reestablish the prominence of the shadblow to be retained. The Princeton Sentry ginkgo row along south side of the former nursery road should also be cleared of volunteer vegetation. A 3' to 5'-wide mulch strip along the length of the row is use a useful way to control woody invasive plants, create a better moisture environment, and encourage ease of maintenance. Munch should be removed and reinstalled annually. In addition it is important to preserve the buildings, structures, site furnishings, and objects, which are part of the cultural landscape.

The overall recommendation is to preserve existing contributing landscape resources, to include the following list enumerated in Analysis, Chapter IV:

- Linear paths and roads in an overall rectilinear pattern of former nursery fields
- Entry landscape at Mapleton Road
- Evergreen nursery windrows
- Princeton Sentry ginkgo row along south side of the former nursery road at edge of former poly house (aka container/ "can" house) and greenhouse area (see Figures V.1 and V.2)
- Shadblow along the access road west of the former production fields
- Columnar sugar maple marking the west entry to the nursery production fields from the entry landscape (see Figure V.1)
- Red oak on site of former worker dormitory
- London plane tree allée on Mapleton Road

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- Remnant nursery water system
- Pin oak allée lining former Camden & Amboy RR road bed (see Figure III.21)
- Remaining buildings and structures

The same elements embody part of the interpretive story of this agricultural landscape for development and production of horticultural plant materials. Over time an interpretation and education program can evolve, aided by site identification and wayfinding, to which various media can be employed. Initially a durable simple interpretive marker system can be used to identify locations where features can be experienced. At entry points, placing simple entry sign boards with property scale and context scale maps, historic images, and simple text with overview text and dates can be an effective approach. In addition, signs off the site (at key intersections etc.) are needed to enable visitors to find the Mapleton Preserve. A modest brochure may be designed using components and images of the CLR and placed in post mounted, hinged wooden boxes. To enlarge the interpretive presentation in the future, electronic media can be employed where tours are downloaded on personal digital devices, such as smart phones and tablets, or recorded messages accessed through use of a cell phone. This kind of platform can be a flexible and informative interpretive program that is readily accessed online. Together a system of clear wayfinding entry signs, property maps, brochure, and PDA tour will form a cohesive program that makes the property and its history more accessible.

D2. Rehabilitate & Maintain Historic Character-Defining Features

This treatment approach responds to both the Heritage and Maintenance considerations in Section C.

In addition to preservation, rehabilitation of the landscape is an appropriate treatment for the Princeton Nurseries Kingston Site. The former commercial landscape is being rehabilitated as a preserve while strongly reflecting the historic landscape character. In a rehabilitation approach, traditional and contemporary issues can be addressed simultaneously, incorporating sustainability and maintainability. Rehabilitation treatment addresses a range of character-defining features, including spatial organization, views, and circulation.

The goal of plantings at the Kingston Site is to suggest the character of the former nursery tree and shrub rows as well as honor the superior improved plant selections made by the Flemer family. These plantings achieve multiple objectives; they define nursery blocks, reintroduce verticality into the landscape, and bring back cultivars connected to the history of this landscape. *Plan 18* and *Plan 18a* propose a slightly different treatment of the plantings along the internal nursery roads. *Plan 18*, the recommended approach, introduces linear Princeton Nurseries shrub, flowering tree and canopy tree plantings; the alternate treatment, *Plan 18a*, utilizes a double row of canopy trees only. These proposed plantings would be selected from notable Princeton Nurseries cultivars, bringing more Princeton innovations to the property, providing plants and shady paths. These proposed plantings would be drawn from the lists included in Chapter II, pages 17, 18, and 19. The selection of specific plants would be based on representative distribution, ease of maintenance, and long-term durability, as well as current availability.

The proposed organization is along paths in a rectilinear layout, referencing the former east-west cultivation rows, observed on the aerial photographs, and organized in an aesthetic and pleasing manner to add further interest. These rows would be reminiscent of the nursery stock patterns,

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evoking an understanding of the greater former nursery stock planted in row after row, without actually planting rows throughout the rectangular plots, which would be maintenance intensive. Historically, commercial stock grown at Princeton Nurseries was cycled out and sold off at a juvenile stage; as a result, plantings did not reach mature growth or develop a dense canopy. This helped to maintain an open, sunny landscape at the site. (See Figure V.3.) New plantings, however, are not intended to be cycled out, so by restricting planting to single rows rather than full blocks, the limited areas of dense canopy would allow for an open landscape, consistent with historic character. Another strong characteristic element of the nursery landscape is windrows. The remaining historic windrows should be managed in the same manner as the new plantings, to the lowest level possible to foster plant health and limit plant nutrient competition from invasive, self-sown plants, which should be removed if possible. Additional planting options could be explored on the site. For example, one or more plots at the southern end of the landscape could be used as a nursery for growing trees/shrubs. Additionally, trees/shrub rows within one of the nursery plots could be laid out in rows that are slightly at an angle to the east-west nursery roads, echoing the Wm Flemer III implementation.

Plantings at the Kingston Site would have an interpretive value specific to Princeton Nurseries, either as a cultivar or selection developed at the Kingston Site or of improved horticultural value from practices on the Kingston Site. They may also serve as a valuable genetic pool for future research and development. The collection would complement the current arboretum planting, which should be retained.

In addition to rehabilitation actions, maintenance procedures are recommended to steward the rehabilitated landscape. The recommended landscape types are both compatible with historic character and mindful of contemporary maintenance capabilities. These landscape types include grassland-meadow cover, wet meadow, woodland, windrow, shrub rows, flowering tree rows, and canopy tree rows. Landscape types are patterned in legible areas and organized for ease of maintenance. The former nursery plots in succession growth would be cleared by brush-hog mowing to remove volunteer woody plants, while documenting the remnant nursery planting species before removal. The proposed grassland-meadow cover within the former rectilinear plots will retain a generally sunny, visually open, landscape, harking back to the nursery openness. Grasslands decrease mowing, which is a carbon output intensive activity, while increasing habitat value and strengthening the open historic landscape character. Annual or bi-annual mowing suppresses woody and invasive species in the grasslands while allowing overwintering and hatching of butterfly species on 2-year-old stalks. Alternatively these plots can be used for agricultural and community garden opportunities that are further discussed in Section D4. In terms of landscape management for areas at the preserve perimeter along access roads, non tenable landscapes and woodland, and stream margins, the establishment of mown edges and establishment of sustainable woodlands edge plantings beyond the mowing line reinforces the former structure of the nursery landscape and with focused edge management, can be retained over time. This same treatment for managed turf cover is recommended in the area of the former complex, which included the dormitory and swimming pool.

Initial inspection and care of newly-established grassland within the rectilinear structure and property margins involves suppression of undesirable weed species for a period of three years. Grassland care, once established, is light with inspection and species control as needed and mowing once every two years. Mowing should be used to suppress woody species which sprout from seed

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annually. Recent research indicates that biannual mowing also supports butterfly habitat, as annual mowing dislodges immature caterpillar cocoons and reduces the breeding and feeding resources of butterflies. The final grassland management inspection and care are determined by the target species and habitat conditions desired.

Mown turf is recommended only nearest the former nursery main office building, D&R Canal State Park Headquarters, and remaining nursery structures. The limited area of turf in need of mowing on a regular basis is the only area maintained in a frequent mowing regime, perhaps 12 to 16 times a year, not in excess of 24. The grass and broadleaf mixture of plants in these areas should be retained, without intensive broadleaf control or intensive fertilization. Long term drought tolerant turf species mixes requiring less managed care are recommended as the need for re-establishment of turf areas arises over time.

In addition to the vegetation treatment options explored above, improvements to the landscape could address historic structures to strengthen historic character. For example, poly houses could be erected in one of the plots south of the Princeton Sentry ginkgo row along south side of the former nursery road, where at one time many such houses were present. Additionally, cold frames were once present east of the greenhouses in the core and could be partially reconstructed.

D3. Enhance Habitat and Ecological Services

Building habitat and ecological services relates to the Ecology consideration in Section C.

The lands surrounding the Princeton Nurseries Kingston site include the D&R Canal, the Mapleton Preserve and other parcels that are conserved and accessible to the public. Considering the water system and wet meadow at the north edge of the site, the stream system further north as it drains toward the Millstone River below the Lake Carnegie dam, and the woodlands around the site, there are opportunities to create a stronger group of wetland, wet meadow, woodland, and meadow landscapes on the former nursery lands and connect these to the adjacent landscapes addressing current fragmentation of small patches with larger more cohesive landscape zones. These zones aid in the effectiveness for cleansing water as it moves from developed areas into the natural biotic drainage system and provide linked habitats for wildlife.

The proposed landscape treatment, shown on *Plans 18, 18a, and 19*, highlights the wet meadow, dry grassland and meadow, and enlarged woodland corridors as the backbone of the ecological system, utilizing the Heathcote Brook drainage system toward the north and east. The level former nursery production fields are intended for plantings of Princeton cultivar shrubs, flowering trees, and canopy trees in linear allées and preserved windrows in a pattern that will be ecologically more effective and resilient than the current patchwork that is resultant of the abandoned nursery operations as described in Section D2. The management of this proposed landscape, in particular the enhanced wetland/woodland system, is directed toward habitat for a host of beneficial insects to build the base of the food chain. Abundant insects foster nesting and migrating birds and various other animals. As indicated above, recommended annual or bi-annual mowing suppresses woody and invasive species in the grasslands while allowing overwintering and hatching of butterfly species on 2-year-old stalks. Extension of specific woodland areas not otherwise part of the current system or proposed for plantings of Princeton cultivars and agricultural uses can be established by managing succession and some planting of native plants or well-behaved Princeton cultivars to enhance woodland value for

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wildlife habitat and movement corridors. In some areas proposed for woodlands, cultivated plants are already in place. These will be absorbed into the woodlands as plantings increase and plants mature, retained as remnants of the nursery era within the evolving woodlands. The wet meadow to the north will be enriched and managed for species diversity and habitat for insects, amphibians, and reptiles. Overall, ecosystem services will be enhanced throughout.

D4. Explore Agricultural Reuse Alternatives

Agricultural uses relate to the Heritage and Maintenance considerations in Section C.

Taking rehabilitation a step further, the Princeton Nurseries Kingston Site landscape can support new agricultural uses, including Community Supported Agriculture (CSAs), community gardens, and leased land for local farmers. (See Figure V.3.) If desirable, the collection of new plantings can include Princeton Nurseries cultivars. Soils testing or review of previous testing should be done prior to the establishment of crops. The arrangement for these possible agriculturally based uses will be organized reflecting the geometry and land use patterns of the former Kingston Site planting operations for production of ornamentals. A rectilinear pattern illustrated on *Plan 18* and *Plan 18a* reflects the former land use patterns preserving the primary north/south and east/west circulation corridors used during nursery operations. This patterning will remain consistent regardless of the plantings within the system, agricultural or community garden based uses. As the need arises for use in the rectilinear plots, fencing will be modeled on the post and wire fence used and still evident along portions of the arborvitae windrow at the west drive. These uses not only return active garden production back to the landscape, but also reinforce the connection between the site and the local community.

As of 2011, the D&R Canal State Park has given special use permits to several individuals/groups for one acre plots to grow vegetables. Two plots are used by a local restaurant group to provide fresh produce for its restaurants. Another plot is used by a part-time farmer who sells fresh produce to two local restaurants and also donates produce to “Elijah’s Promise”, a New Brunswick organization providing free food to the poor and unemployed. The farmer plans to involve some of the unemployed in production. The remaining plot has not yet been put into use yet, but will also be used to provide food to a restaurant. Fencing has been necessary to prevent deer damage to the crops, small structures have been erected, and in one case a picnic table and benches were added as was a substantial gas grill. Currently the special use permits are for one year, but renewable.

The degree of water needs on the Kingston Site will vary based on the land use and vegetation cover type implemented. Use of the rectilinear plots for agricultural activities requires a larger volume and more regular watering than meadow cover. The current water supply of the D&R Canal State Park Headquarters cannot meet the anticipated needs for agricultural activities. New water supplies can be addressed in several ways and will likely require a combination of methods. The main well used by the former nursery operations is on an offsite location and not accessible for this effort; another well is on the site of the D&R Canal State Park headquarters, but has been sealed. Reopening the well or drilling a new well may be possible, but will require a permit from the State of New Jersey. This approach is currently discouraged by the State due to concern of groundwater depletion.

Two alternate sources include use of stormwater and water from Lake Carnegie. Collection of stormwater from the large roof atop the shipping and packaging structure and associated smaller

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building and piping it to underground storage tanks can provide a ready source of stored water. Water would be pumped to outflows in the agricultural areas as needed. Water that supplied the need of the former nursery operations was provided by pumping water from a pond fed, through a culvert under the D&R Canal by Lake Carnegie, to the nursery fields. The location of the pump house remains at the edge of the D&R Canal; the various pipe routes also remain. The possibility for reinstituting this water supply route from Lake Carnegie is worthy of further consideration and can be explored as a viable water supply source.

D5. Reinststate Internal Roads & Consider Link to Surrounding Trails

This section relates to the Access, Linkage & Context considerations in Section C.

The enhancement of public access for the Mapleton Preserve utilizes the former nursery circulation patterns to support contemporary land use, understanding, and enjoyment. Treatment recommendations are to clear the system of former nursery access roads of overgrowth and brush for 8 to 12 foot widths and top the former roads with gravel and stone dust to form an easily accessed path. If feasible in terms of funding, the wider main paths should be paved in asphalt using standard roadway detail for good durability and long lifespan. These details for asphalt and gravel paths should be developed for durable results that limit annual upkeep. A connected system of asphalt major paths would encourage bicycle and pedestrian access within the property. Dependent upon available funding and maintenance abilities, lesser paths may be maintained in mown turf. *Plan 19* illustrates the system of recommended circulation within the core Mapleton Preserve area. Also shown are several trailhead points, located as site markers. At each of these trailheads, a modest bike rack, an entry signboard with property and area maps that encourage use and connections, and some other locations Princeton Nurseries historic images for interpretation are recommended to identify the property and provide basic information. Existing paved areas can be used for trail parking, marked by the wayfinding and interpretation signboard. These simple durable features encourage use and, if durably rebuilt, managed and maintained, also foster respect. Additionally, traffic barriers and gates control vehicular access to the landscape.

The adjacent lands surrounding the Kingston Site are accessible to the public and have path and parking accommodations at varying levels. *Plan 19* shows entry points with access to public roadways and trails that can link to these adjacent properties including the proposed multi-modal trail along the former rail line with access from areas east of US Route 1 to the Delaware & Raritan (D&R) Canal State Park. The combined acreage of the NJ DEP and South Brunswick Township lands are extensive. D&R Canal State Park, part of the National Recreation Trail System, is a 70-mile long recreational corridor enjoyed by a variety of users, including bicyclists, canoers, hikers, runners, and horseback riders.⁶ In Princeton, the park parallels Mapleton Road, west of the Kingston Site. The historic towpath along the main canal from Bakers Basin Road in Trenton to New Brunswick, including Kingston, has a natural surface for hiking, jogging, horseback riding, and biking.

Two possible connections are presented between the Mapleton Preserve and the D&R Canal trail system: one near the north, at the roughly parallel to, or on, the bed of former Rocky Hill Branch RR and the other at the south end of the Preserve directly opposite the DEP property to the west. In addition, the former Camden & Amboy Railroad roadbed provides a connection from the Mapleton Preserve to the Cook Natural Area, Heathcote Meadow County open space and the

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Township Heathcote Park (it also will provide a connection to Monmouth Junction in the future); the former Camden & Amboy Railroad roadbed west of Mapleton Road also provides the opportunity for a connection from the Mapleton Preserve once the Princeton University property used by Mapleton Nursery is turned over to DEP. All of these routes include at least one crossing of a road and thus involve consideration of safety issues that can be addressed in future planning for implementation.

The near adjacency to the commercial development zoned properties of Princeton University provide yet additional linkage to higher density commercial areas and local residential areas. Designated non-buildable areas and utility rights of way such as the sewer lines may be used effectively for trail and pathway construction. Establishing clear linkages to the adjacent properties will bring the former nursery core area into the broader local and regional landscape network more effectively. More naturalized trails throughout the woodland and drainage areas on the Preserve and adjacent public lands add to the interest in the property, increasing the type and number of potential users who will enjoy the passive recreational grounds.

D6. Consider Context of Surrounding Lands & Partners & Community Use

This section relates to the Access, Linkage & Context considerations in Section C.

As described above, treatment recommendations establish and increase visibility and use of the core Kingston Site landscape through vegetation management, circulation improvements, wayfinding, simple trailheads, and trail linkage to the broader public access lands and community. Landscape and community context is an important factor within the recommended treatment. The relationship between Mapleton Preserve and the surrounding community is important to the vitality of the landscape, and should be viewed as a partnership. Working cooperatively with adjacent and nearby public and private landowners sets the groundwork for a mutually beneficial relationship that will encourage sound stewardship and appropriate, compatible future land development in the areas surrounding Mapleton Preserve. Preservation and rehabilitation treatment of the Kingston Site fosters the use of trails both inside Mapleton Preserve and extending outward into the community. Agricultural options on the site, such as CSAs, gardens and farming, will draw users to the site as well as respond to community needs, desires, and local context.

Specific treatment recommendations address the preservation of landscape surrounds and remnant features, including windrows and tree allées along Mapleton Road and the entry drive to the nearby Mapleton Nurseries. In terms of broader land conservation, *Plan 19* shows the adjacent and nearby lands that are currently protected under a conservation easement or park land designation by South Brunswick Township or the New Jersey Department of Environmental Protection. Land ownership and the potential for either appropriate or inappropriate adjacencies arise from the current ownership patterns.

While much of the surrounding land is already protected in some manner, the lands to the south and east are not. Today, the long term use and character of the adjacent privately-owned parcels is unclear. Considerable acreage owned by Princeton University also abuts the former nursery core area and includes remnant windrow features. The future of these lands, particularly in close proximity to the Kingston Site core area, will have an influence on the character of the Mapleton Preserve landscape and interpretation as the seat of the former Princeton Nurseries. The previous

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development of the university holdings provides a basis for understanding that intensive development is possible. Retaining former nursery windrows within an open surround and securing the use of utility and non-buildable areas for trail access are important issues as future development approvals are sought and discussed, prior to development proceeding. The conservation of selected parcels and historic nursery features should be carefully considered as lands come forward for more intensive development. A conservation easement as an additional level protection for the lands south of the core is recommended, specifically the parcel owned by the South Brunswick Township and the western section of a parcel owned by Princeton University.

Understanding current land use zones and related development opportunities and requirements is an important strategy in the long-term stewardship of this landscape. As adjacent and nearby lands become developed and new land uses are added, these changes can either enhance or detract from preserved and conserved lands. Protected open space is at the core of Mapleton Preserve. Future opportunities may exist to consolidate former nursery parcels for a larger and potentially contiguous land holding; forethought to anticipate future possibilities is an important preparation toward benefitting from opportunities if they arise.

E. CULTURAL LANDSCAPE CONCLUSION

Multiple values are inherent in the landscape of the Princeton Nurseries Kingston Site. The site today is something of a hidden treasure that will continue to increase in value as the surrounding communities expand and develop lands. The recommended preservation and rehabilitation treatment seeks to make the Princeton Nurseries Kingston Site acreage more valued as a cultural, ecological, and recreational resource for local and regional users. Recommendations address the following considerations for each of the areas within the Mapleton Preserve of the former Princeton Nurseries Kingston Site:

HERITAGE: Preserve, Steward & Interpret the Landscape

- Maintain and reinstate the character-defining features, landscape, remaining buildings and other features, of the former Princeton Nursery operations to accommodated contemporary use and as interpretive elements for this important site.
- Provide signs to guide the visitor to the site and on the site.
- Implement a series of interpretive signs and personal digital devices to tell the story of Princeton Nurseries on the site.
- Provide a variety of experiences to attract different user groups with both educational information and easy accessibility.
- Encourage repeat users as a foundation for volunteer efforts in the stewardship and care of the property into the future.

MAINTENANCE:

Landscape: Organize Landscape Types for a Limited Maintenance

- Organize the maintenance operations to address individual land cover types, turf, meadow, woodland border, woodland, and interpretive ornamental and tree and shrub row plantings.
- Use durable and readily available regional materials for construction of landscape elements and circulation feature in the landscape.

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- Utilize sound and standardized detailing, appropriate to the Kingston Site, for ease of construction methods and future repair needs.
- Undertake a strategy and work plan for use and management with limited municipal staff and volunteer maintenance efforts.
- Discuss the use of dedicated staff with the municipality for routine maintenance operations.

Buildings and Structures:

- Buildings with preservation plans: Implement preservation plans.
- Buildings without preservation plans: Provide and implement preservation plans.

ECOLOGY: Conserve & Manage the Landscape for Enhanced Ecosystem Services

- Promote ecologically stable hydrological and vegetative systems through landscape and habitat enhancement and management.
- Establish areas of meadow and woodland border for increased bird and wildlife habitat.
- Institute low mow and no mow grass species for lawn turf areas, reduce and eliminate use of commercial pesticides and unnecessary lawn care chemical applications.
- Define areas of light agricultural and/or community garden uses and promotion of soil conservation in former nursery planting beds.
- Consider the collection and reuse of stormwater collection for irrigation of agricultural plantings.
- Investigate reinstitution of the former water pumping system from Lake Carnegie for non portable water supply for agricultural and property use.

ACCESS: Enhance Public Access Supporting Landscape Use, Understanding & Enjoyment

- Utilize former nursery circulation drives and field roads for pedestrian access throughout Mapleton Preserve.
- Implement a hierarchy of pathways both for enjoyment and interpretive opportunities.
- Establish woodland trails within the stream/woodland ecological system for controlled and managed access.
- Define parking within the core of the former D&R Canal State Park Headquarters area with modest expansion near the former blacksmith shop, or use existing paved areas for trail parking.

LINKAGE: Connect Adjacent Public Lands as Part of a Landscape Network

- Provide pedestrian and bike trail connections to pathways connecting Mapleton Preserve with adjacent public lands including the D&R Canal tow path.
- Foster the implementation of the former rail line multi-modal path segment through the property.
- Identify future connections with developmental lands to the south and east.

CONTEXT: Preserve the Surrounds & Remnant Features

- Develop a cooperative partnership with adjacent and nearby public and private land owners to foster engagement with the landscape (including trail use, CSAs, community gardens, etc.) and to encourage compatible development in the areas outside Mapleton Preserve.
- Identify the potential impacts on Mapleton Preserve by development of the adjacent commercial landholdings to the south and east.

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- Communicate the importance of extant nursery features to community landholders, including the windrows, to establish their value into the future.
- Communicate the importance of the oak allée of (*Quercus* species), planted by William Flemer Jr., lining the entry drive to Mapleton Nurseries located across Mapleton Road from Mapleton Preserve.
- Advocate for the preservation and management of the rows of sycamore trees (*Platanus occidentalis*) William Flemer Jr. planted in the early 1930s that continue to line Mapleton Road today.
- Link Mapleton Preserve with the adjacent public lands, including D&R Canal State Park, as the core of the once larger nursery landholdings that make up the current surrounding community.

At the Kingston Site, treatment and management recommendations seek to steward the rich history of Princeton Nurseries while considering Mapleton Preserve needs, uses, and goals today and into the future. This approach to landscape care, enhancement, management, and sustainability defines a set of treatment recommendations and options for preservation and rehabilitation. Recommendations frame a philosophy that guides decisions about preservation, stewardship, use, maintenance, and future initiatives. Ultimately, a preservation and rehabilitation-based treatment protects and enhances the historic landscape character while cultivating high quality visitor experience and community connections to the site. Extant and rehabilitated historic features convey the former commercial agricultural character and use of the site; this character and sense of place should be used as a baseline to guide future efforts.

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CHAPTER V ENDNOTES

¹ Charles A. Birnbaum, with Christine Capella Peters, *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, (Washington DC: 1996); National Park Service, *NPS-28: Cultural Resource Management Guideline* (Washington DC: 1998); *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*, U.S. department of the Interior National Park Service, Cultural Resource Stewardship and Partnerships, Park Historic Structures and Cultural Landscapes Program (Washington DC: 1998).

² Birnbaum, with Peters, *Guidelines*, 18.

³ Birnbaum, with Peters, *Guidelines*, 48.

⁴ Birnbaum, with Peters, *Guidelines*, 90.

⁵ Birnbaum, with Peters, *Guidelines*, 128.

⁶ Delaware & Raritan Canal State Park, "General Information". Available at http://www.dandrcanal.com/gen_info.html.

